

LineA na era do LSST

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8 de Fevereiro, 2021



- Origem do BPG
- Atividades Recentes do LineA
- Sugestões para a operação do BPG

- 2008 – A Glimpse into the Future of Astronomy (Rio de Janeiro)
- 2008 – New Astronomy: the Data Challenge (Rio de Janeiro)
- 2009 – Apresentação de versão preliminar do portal científico para pesquisadores do LSST
- 2009 * – INCTA cria grupo de estudo para verificar possibilidade do Brasil se associar
- 2011 * – Reunião do diretor do LNA e pesquisador da USP com Comitê Gestor do LSST (Tucson)
- 2012 * – Science with the LSST: A Brazilian/US joint Workshop (Campos de Jordão)
- 2012 – All hands Meeting com a participação do diretor do LNA e do coordenador do LineA (Tucson)
- 2014 – DES-LSST Workshop com apresentações de trabalho do coordenador e pesquisador do LineA (Fermilab)
- 2014 – Reunião coordenador do LineA com Comitê gestor do LSST (Tucson)
- 2014 – LSST 2014 com a participação de coordenador e pesquisador do LineA (Phoenix)
- 2014 – Organização pelo LineA do Workshop XLDB South America (Rio de Janeiro)
- 2014 – Levantamento do interesse no LSST organizado pela SAB/LineA/LNA
- 2014 – Acordo de colaboração técnica entre o LineA e o LSST
- 2015 – Carta da SAB ao Ministro de Ciência, Tecnologia e Inovação de apoio às negociações do LineA e o LNA com o LSST
- 2015 – Estágio de pesquisador do LineA no LSST
- 2015 – Acordo entre o LineA e o NCSA (USDF)
- 2015 – Assinatura do Acordo de participação de pesquisadores brasileiros no LSST

MEMORANDUM OF AGREEMENT

Regarding collaboration in the scientific exploitation of data acquired with the Large Synoptic Survey Telescope (LSST) by specified Principal Investigators (PI) and scientists in Brazil as per contributions to the LSST fiber optic networks connecting South America and North America during LSST survey operations.

BETWEEN

LABORATORIO INTERINSTITUCIONAL DE E-ASTRONOMIA
hereinafter referred to as "**LineA**"

AND

THE LARGE SYNOPTIC SURVEY TELESCOPE CORPORATION,
a United States 501(c)3 non-profit corporation
incorporated in the State of Arizona
hereinafter referred to as "**LSSTC**",

AND

**THE LARGE SYNOPTIC SURVEY TELESCOPE PROJECT OFFICE
OF THE ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY**
hereinafter referred to as "**LSSTPO**",

all hereinafter referred to collectively as "**the Parties**" or individually as "**the Party**."

M.O.A._LSST_2015



Página 1 de 7

2015

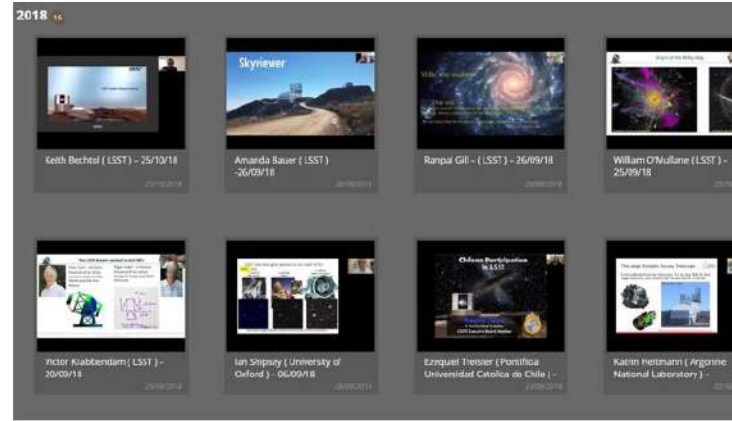
WHEREAS LineA is responsible for the development of software tools of interest to LSST, and has previously signed a technical collaboration agreement with LSST's data management team,

Atividades patrocinadas pelo LineA & INCT



Brazilian Participation Group (50 participants)

Chamada 1 - 10 de Fevereiro de 2017
Chamada 2 - 30 de Setembro de 2018



29 LSST related webinars

Comissão de Seleção

Beatriz Barbuy; Othon Winter; Karin Melandez; Roberto Martins (presidente)
Adriana Valio; Bruno Castilho; Mlriani Pastoriza (pediram para não participar)



Pesquisador do LineA faz estágio no LSST

30 de setembro de 2015



LineA assina acordo com o revolucionário projeto LSST

14 de dezembro de 2015



Site do LSST Brazilian Participation Group entra no ar

05 de julho de 2016

Atividades - 2018



Participantes do BPG-LSST apresentam as atividades de seus grupos de pesquisa

04 de janeiro de 2018



Comunidade Chilena se prepara para o LSST

05 de janeiro de 2018



Discutindo Tecnologia no LineA: Desafios e Perspectivas

15 de janeiro de 2018



Reunião do grupo de trabalho sobre energia escura do projeto LSST

01 de março de 2018



Reunião de planejamento do Centro de Dados Regional do LSST

14 de março de 2018



LSST: de idéia a realidade

26 de março de 2018



Resultados do primeiro encontro de planejamento do DAC brasileiro

04 de abril de 2018



Integração digital: transmitindo dados a 100 Gbps entre as Américas

06 de abril de 2018



Encontro aborda a exploração de dados na era do LSST

26 de julho de 2018



Segunda chamada para participação no LSST Brazilian Participation Group

03 de agosto de 2018



South American Workshop on Cosmology in the LSST Era

15 de agosto de 2018



Encontro de educação, tecnologia e inovação discute seu impacto na América Latina

20 de setembro de 2018



LineA cria comitê para definir novo centro de processamento na era do LSST

26 de setembro de 2018



Atividades de brasileiros participantes do LSST são avalladas

03 de outubro de 2018



Participantes brasileiros do levantamento LSST realizam maratona de atividades

17 de outubro de 2018



Planejando um Centro de Suporte para e-Ciência

22 de outubro de 2018



ABC promove reunião sobre grandes projetos de colaboração internacional

03 de dezembro de 2018



Especialistas discutem resultados esperados de futuro megatelescópio

21 de dezembro de 2018

Atividades - 2019



INCT do e-Universo e LineA realizam planejamento estratégico

08 de abril de 2019



LineA aumenta poderio computacional

17 de abril de 2019



Evento na UNESP discute infraestrutura para grandes projetos de pesquisa

23 de maio de 2019



e-Astronomia no maior evento científico da América Latina

09 de agosto de 2019



LineA debate as atividades planejadas para o ano, objetivando correções de rumo

12 de agosto de 2019



O INCT do e-Universo promove semana de treinamento para jovens pesquisadores

27 de agosto de 2019



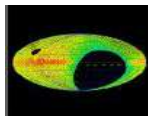
Recente progresso na câmera de teste do LSST

28 de agosto de 2019



Membros do LineA participam de reunião anual do LSST

03 de setembro de 2019



Afiado ao INCT do e-Universo participará de reunião sobre o LSST na Califórnia

30 de setembro de 2019



Gerenciando observações astronômicas na era de grandes volumes de dados

14 de novembro de 2019



Teste de transmissão e latência da rede: à espera dos dados do LSST

18 de dezembro de 2019



LineA torna-se uma associação

06 de fevereiro de 2020



Rede de Ocultação Sul-Americana é pré-aprovada em consulta à Fundação John Templeton

20 de fevereiro de 2020




Reunião do Dark Energy Science Collaboration em Janeiro de 2020

13 de março de 2020



Reunião do Dark Energy Science Collaboration em Janeiro de 2020

13 de março de 2020



Instalação do Lustre

01 de dezembro de 2020



Diretor do LineA participa do 21º Workshop RNP abordando o tema e-Ciência

15 de dezembro de 2020

- Fundação Templeton Projeto ROSA (pre-projeto) August 2019
- In-kind proposal LOI 14/11/2019
- DOE/NSF answer 7/04/2020
- Criação da Associação Janeiro 2020
- Fundacao Templeton (projeto) Janeiro 2020
- Proposal submitted 23/09/2020
 - IDAC
 - Photo-z para o projeto
 - Pipeline Scientists
- LSSTC - proposta submetida (October) accepted (January)
- LSSTC - 1o de Fevereiro
- Acordo sobre exp viewer em andamento
- DESC
 - DESC-wide meeting in support of data rights proposals (September)
 - DESC Winter (January)
- Project
 - Meetings with Greg & Knut
 - Meetings with Phil
 - Meetings with Meg
 - LSST First Operation Boot Camp (October)
 - LSST Community Engagement Discussion Series (November DP0)
- Reunião MCTI
- Minuta de proposta submetida MCTI
- Infraestrutura
 - Lustre
 - Kubernetes
 - Comanage
 - Rubin Science Platform
- Workshop sobre Centro de dados
- Conversando sobre TI
- LSST Portal
- Planejamento - Brasil na era do LSST
 - Proposta de parceria com o LNCC/RNP
 - Design Sprint

LineA in-kind Contribution proposals



Notification of Approval to Further Develop

Proposed In-Kind Contributions in Return for LSST Data Rights

We are happy to inform you that your Letter of Interest (LOI) outlining possible in-kind contributions to Rubin Observatory has been **reviewed by NSF and DOE and approved for further development**. Following our email from February 17, 2020, we can confirm that the deadline for developing a full proposal has been moved to the end of June this year.

LOI Code	Contribution Title	CEC/Rubin Priority	Contribution Feedback
BRA-LIN-1	Science Platform Extensions	(3) Low	The CEC discourages you from including this contribution in your proposal. Much of what is proposed is already under development at Rubin, hence the "Low" priority assignment. However, contributions of directable effort, to be embedded in the SPaRE team at Rubin, and maintained well into the survey operations era, could make a valuable contribution: the key aspect would be for those contributed staff to take functional direction from the SPaRE team leadership, and work on the Rubin software in response to the evolving demands of operations. If this is of interest, please coordinate with the SPaRE team via the contacts in the Handbook.
BRA-LIN-2	Spectroscopic samples	(1) High	The CEC encourages you to develop and include this contribution in your proposal. The recipient group expected for this contribution is the NOIRLab CSDC, please do work with them as you develop your proposal. Coordination of contributions

			relating to photo-z's will take place this summer, which could be relevant for spectroscopic photo-z training data.
BRA-LIN-3	Brazilian Value-added Catalogs	(-) More Information Needed	The CEC found it difficult, when evaluating your LOI, to assign a single priority at this stage, because there was insufficient information to assess it, and/or there were many possible contributions. Therefore the CEC recommends you seek further feedback from the expected recipients about the content and value of this LOI concept, and provide more information as per the guidelines in the Handbook, if/when developing it for your proposal. The recipient group expected for this contribution is the LSST Dark Energy Science Collaboration, Galaxies Science Collaboration, and the Rubin Photo-z Coordination Group, please do work with them as you develop your proposal. Coordination of contributions relating to photo-z's will take place this summer. Value-added catalogs come in two flavors, described in the Handbook: one flavor primarily requires non-directable software development effort, and the other needs the addition of complementary data. Please read the guidelines in the Handbook carefully, and propose contributions that are have one of these flavors, with each contributions defined separately as per the template. Note that the value of each contribution will be assessed according to these criteria, with additional costs (such as computing power) borne by the contributor. Regarding the specific types of value-added catalogs and their value to the LSST Science Collaborations, we recommend you consult the Galaxies SC and Dark Energy SC directly for more informal feedback. Derived parameters (absolute magnitude, SFR, stellar mass etc) will be useful for Galaxies science, especially in the dwarf galaxy regime which cannot be accessed by other surveys because they are deep and wide like LSST. The value placed on these catalogs will depend on plans for validation of these quantities e.g. how do they compare to spectroscopically derived values and what are the typical uncertainties, especially in regimes which are inaccessible to other surveys.
BRA-LIN-4	Brazilian Cosmological Calculations	(-) More Information Needed	The CEC found it difficult, when evaluating your LOI, to assign a single priority at this stage, because there was insufficient information to assess it, and/or there were many possible contributions. Therefore the CEC recommends you seek further feedback from the expected recipients about the content and value of this LOI concept, and provide more information as per the guidelines in the Handbook, if/when developing it for your proposal. Coordinate with expected recipients on how to ensure effort is associated with high-priority areas, or make the contribution directable. The recipient group expected for this

BRA-LIN-5	Brazilian EPO	(3) Low	The CEC discourages you from including this contribution in your proposal. Since this contribution would not enhance the Rubin EPO program for US audiences, it will not be considered as an in-kind contribution for data rights. If the LineA team has access to expertise in education design and could modify the educator support materials to be specific to the needs of the Brazilian education standards, that would be of value to the Portuguese-speaking world and we encourage them to pursue that independently.
BRA-LIN-6	Brazilian Science Software Development Effort	(1) High	The CEC encourages you to develop and include this contribution in your proposal. What you have written in your LOI sounds as though it could be directable pooled effort OR directable dedicated effort within one or more science collaborations. Please consult the handbook carefully to confirm, and re-work your contribution accordingly, potentially including splitting it into >1 contributions if that is your intention. Note that directable, pooled developer effort is highly valued. The recipient group expected for this contribution is the Rubin International Program Coordinator (Software Development), please do work with them as you develop your proposal.
BRA-LIN-7	Brazilian IDAC	(1) High	The CEC encourages you to develop and include this contribution in your proposal. Both Rubin and the CEC recommend that you consider proposing a "Lite IDAC" hosting and serving a subset of the LSST data, as per the description in RTN-003 (see the Handbook for details). The recipient group expected for this contribution is the Rubin IDACs Coordination Group, please do work with them as you develop your proposal. They may put you in contact with other groups working on IDAC design. Please refer to the Handbook for information about "Lite" IDACs as well as non-IDAC computing resource contributions.
BRA-LIN-8	Robotic 16in Stellar Occultation Network	(-) More Information Needed	The CEC found it difficult, when evaluating your LOI, to assign a single priority at this stage, because there was insufficient information to assess it, and/or there were many possible contributions. Therefore the CEC recommends you seek further feedback from the expected recipients about the content and value of this LOI concept, and provide more information as per the guidelines in the Handbook, if/when developing it for your proposal. The CEC's sense is that this telescope time might be useful, as part of the wider AEON network: the team should consult the Handbook and coordinate with AEON. Indeed, Rubin expects all observing time at facilities with apertures less than

BRA-LIN-9 Solar System Portal

9

(1) High

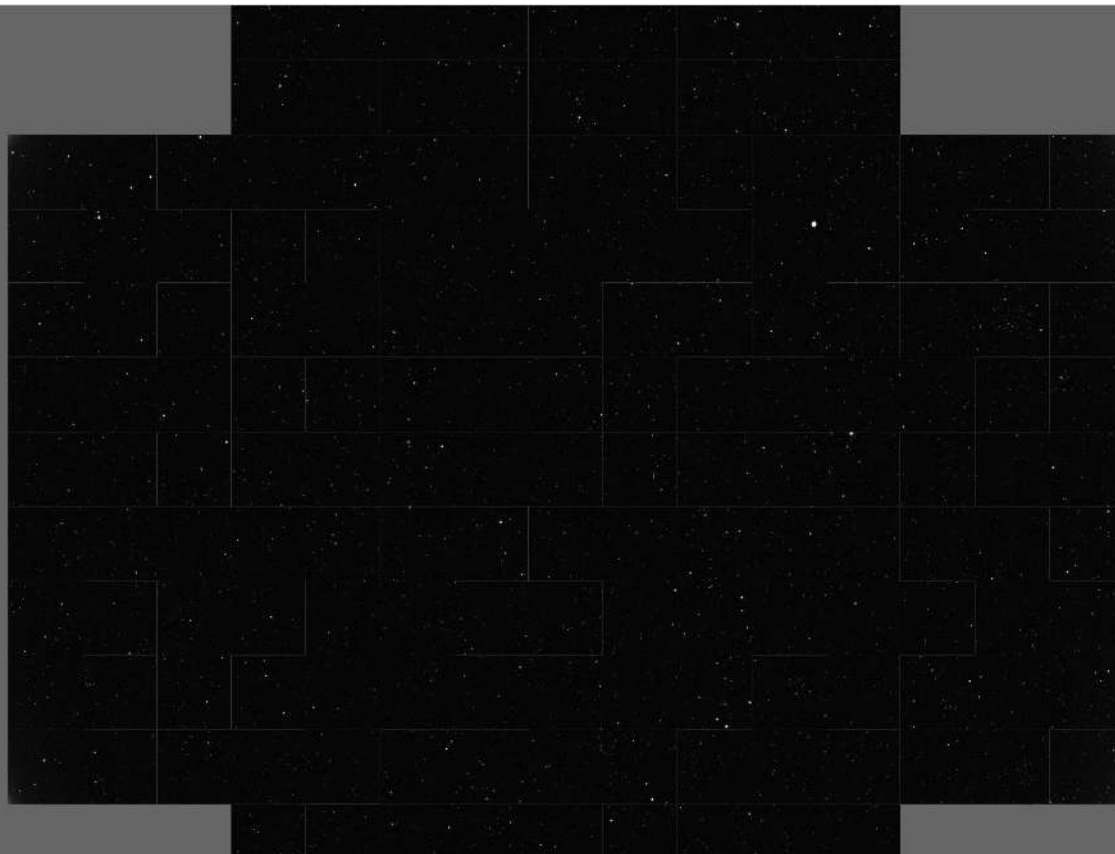
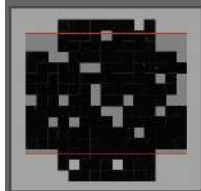
The CEC encourages you to develop and include this contribution in your proposal. As outlined in the Handbook, software contributions may be directable or non-directable; non-directable contributions require endorsement from the intended recipient in advance of proposal submission. What you have written in your LOI sounds best-matched to non-directable effort, to be embedded in the Solar System Science Collaboration. Please consult the handbook carefully to confirm, and develop your contribution accordingly. You may also like to consider offering an element of high-priority directable effort to ensure high compatibility with the SSSC's goals, please refer to the Handbook for more information on this type of contribution. The recipient group expected for this contribution is the LSST Solar System Science Collaboration, please do work with them as you develop your proposal. The occultation prediction system that the team plans to build is on the SSSC science roadmap, and hence high priority.

ExpViewer - em negociação



exp-010

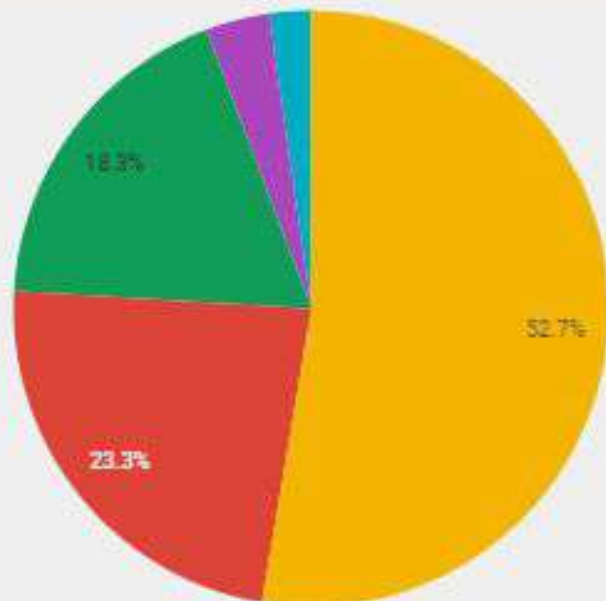
Received Message



Despesas de participação em reuniões por colaboração

Valor (R\$)

230,694.26

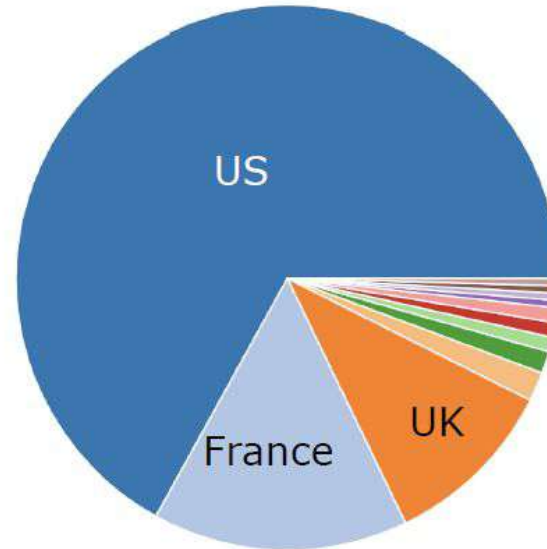


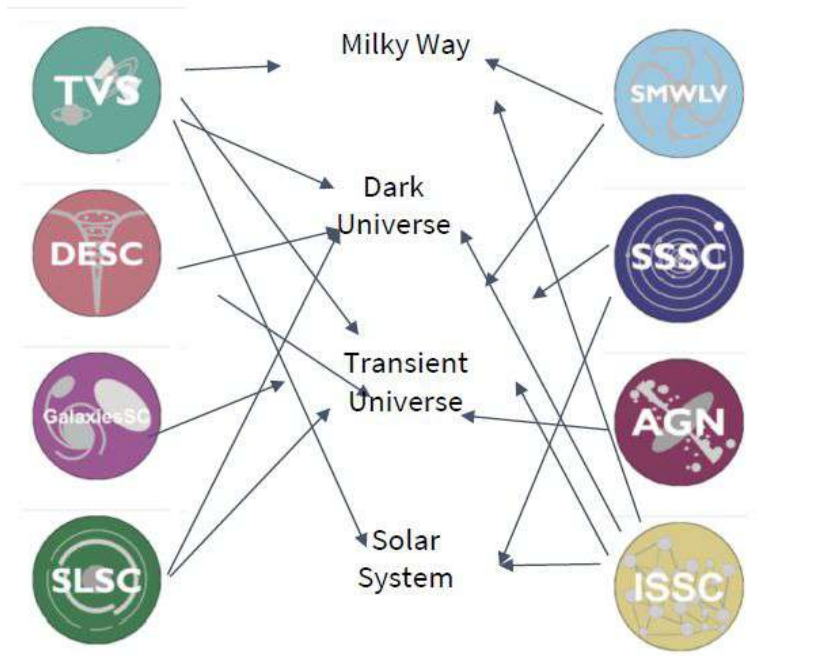
Somente
colaborações
científicas e tipo
de atividade
'Reunião'

● LSST ● DES ● DESI ● TNO ● SDSS

1. Nicolaci (PI)
2. Adriano
3. Michel Aguenta *
4. Julia Gschwend
5. Julio Camargo (PI)
6. Rodrigo Boeufkeur
7. Gustavo Rossi
8. Bruno Morgado
9. Rogerio Rosenfeld (PI)
10. Felipe Oliveira
11. Mariana Penna Lima (PI)
12. Sandro Vitenti *
13. Valerio Marra (PI)
14. Tassia
15. Time de TI do LineA
 - a. Carlos
 - b. Jeferson
 - c. Singulani
 - d. Glauber
 - e. Matheus

Full Members by country





Precisamos:

Integrar

Colaborar

Expandir (outras áreas)

Sinergia com DESI

(MW, DE, AGNs)

- Novas chamadas - aguardar resultado das propostas
- Prospecção de candidatos nas áreas de Milk Way, AGNs, Astronomia Estelar (variabilidade)
- Mudanças no processo de seleção
 - Mudança na relação PI - ECS
 - Potencial de 40+ jovens pesquisadores
 - Convocação de ICs
- Indicar coordenador do BPG
- Escolher spokesperson do BPG
- Melhor divulgação do projeto
 - Explorar Sinergia LSST e DESI
 - Participação no Design Sprint: LineA na era do LSST=
- Participação brasileira no LSST além do BPG

- Responsabilidades do coordenador
 - Representar colaboração junto ao CG INCT (financiamento de viagens)
 - Representar a colaboração no CG LineA (definir prioridades de serviços, preparacao de orcamento)
 - Organizar reuniões trimestrais do BPG
 - Organizar reunião mensal com PIs
 - Realizar survey semestrais de participação
 - Organizar relatório anual
 - Manter atualizado lista de participantes
 - Preparar blogs & tweets regulares
 - Preparar press releases
 - Informar sobre eventos
 - Propor speakers para o webinar
 - Manter páginas no site
 - Manter google docs listando
 - lista de participantes e posições
 - Projetos propostos e em andamento
 - Artigos em preparação, submetidos e publicados
 - Teses em andamento e concluidos
 - Tabela listando de telecoms e participantes brasileiros
 - Link para relatorios anteriores
 - Relatorios de pipeline scientists

Responsabilidades dos PIs

- Organizar reuniões temáticas
- Informar coordenados sobre atividades do grupo
- Preparar relatórios
- Validar resultados do survey
- Manter atualizado planilha de telecons de suas áreas
- Fornecer coordenador com as necessárias informações
- Reunião mensal com coordenador
- Redigir tweets/blogs
- Garantir nos trabalhos de seu grupo o reconhecimento ao LineA (afiliação) e INCT do e-Universe (agradecimentos)

Responsabilidades dos Membros

- Participar de telecons internacionais regularmente
- Participar das atividades organizadas pelo LSST
- Participar das atividades organizadas pelo BPG
- Participar das atividades organizadas pelo LineA (hotspot, webinar)
- Participar das telecons internacionais
- Manter PIs informados de suas atividades

- LineA trabalhando para expandir o BPG e apoiar toda a comunidade
- Maior engajamento do BPG (telecons e reuniões de colaboração)
- Estruturar o funcionamento do BPG => maior integração
- Ajudar na prospecção de novos candidatos
- Engajar a comunidade para usar os dados => apoiar o IDAC-Brazil
- Participar do Design Sprint do LineA